

REMARKS

Claims 1, 4 – 10 and 12 – 15 are presented for reconsideration and further examination in view of the foregoing amendments and the following remarks.

In the outstanding Office action, the Examiner objected to claims 1 – 13 because of informalities; claims 3 and 4 were noted as being indefinite under 35 U.S.C. §112, second paragraph; claims 1 – 5, 7 and 14 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent no. 6,466,694 to Kamada et al. (hereinafter referred to as “the Kamada et al. ‘694 reference”); claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Kamada et al. ‘694 reference in view of U.S. patent no. 5,717,794 to Koga et al. (hereinafter referred to as “the Koga et al. ‘794 reference”); claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Kamada et al. ‘694 reference in view of U.S. patent no. 4,785,296 to Tabata et al. (hereinafter referred to as “the Tabata et al. ‘296 reference”); and claims 9 – 13 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Kamada et al. ‘694 reference in view of U.S. patent no. 6,043,823 to Kodaira et al. (hereinafter referred to as “the Kodaira et al. ‘823 reference”).

By this Response and Amendment:

claims 4 – 8, 10 and 12 – 13 have been amended to correct the cited informalities;

claims 2 – 3 and 11 have been canceled;

claim 1 has been amended thereby obviating the rejections under 35 U.S.C. 102(e) and thereby obviating the same rejections to the claims dependent thereon;

the 103(a) rejections to claims 6 and 8 have been rendered moot by the foregoing amendments; and

the 103(a) rejections to claims 9 – 13 and 15 have been traversed.

It is respectfully submitted that the above amendments and corrections do not introduce any

new matter to this application within the meaning of 35 U.S.C. 132. Support for the amendments to claims 1 and 9 is found on page 9, line 35 through page 10, line 10 and on page 14, lines 21 – 31.

Objections to the Claims

The Examiner objected to the claims because of informalities in that the independent claims recite “a document modification apparatus” whereas the dependent claims recite “a document modification means.”

Response

By this Response and Amendment, the claims have been amended to obviate the examiner’s objections. The dependent claims have been amended by changing the word “means” to –apparatus– so as to conform to their respective base claim. Accordingly, reconsideration and withdrawal of the objections is respectfully requested.

Rejections under 35 U.S.C. 112, second paragraph.

The Examiner rejected claims 3 and 4 under 35 U.S.C. 112, second paragraph, as being indefinite, stating: “the phrase ‘such as’ recited in line 4 of claim 3, renders the claim indefinite.”

Response

By this Response and Amendment, claim 3 has been canceled thereby rendering the Examiner’s rejection thereto moot. Furthermore, the dependency of claim 4 has been changed from claim 3 to claim 1. Claim 1 does not contain the phrase “such as,” as did claim 3. Thus, the rejection to claim 4 is also rendered moot by the foregoing amendment. Accordingly, reconsideration and withdrawal of the rejections is respectfully requested.

Rejections under 35 U.S.C. 102(e)

The Examiner rejected claims 1 – 5, 7 and 14 under 35 U.S.C. 102(e) as being anticipated by the Kamada et al '694 reference.

Response

Dependent claims 2 and 3 have been canceled thereby rendering the Examiner's rejection thereto moot. Independent claim 1 has been amended to obviate the Examiner's rejections under 35 U.S.C. 102(e). As amended, the rejections are traversed.

In particular, Applicants amended claim 1 to recite a region extracting means that comprises a first judgment means for judging whether an attribute of a rectangle region is one of a character and ruled line. Claim 1 has been further amended to recite a projection means and a second judgment means for judging whether the attribute of the rectangle regions is one of a table, a photograph, and a frame.

For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is expressly found or inherently described in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990). Emphasis added.

The present invention as claimed in independent claim 1 is directed toward a document modification apparatus. More particularly, claim 1 claims a region extraction means comprises a first judgment means for judging whether the attribute of a *rectangle* region is one of a

“character” and “ruled-line.” Further, claim 1 claims a “projection means” takes projection data in both a *vertical and a horizontal direction* of the rectangle region. Lastly, claim 1 claims a second judgment means judges whether an attribute is one of a table, a photograph and a frame based on *peaks* detected from the projection data.

The Kamada et al. ‘694 reference discloses performing region identification of an input image. The type code of each region and the individual code of a recognition result are then displayed, so that a user can modify both of the results of the region identification and the recognition process at one time. The Kamada et al. ‘694 reference also discloses displaying an original image close to the recognition result. The Kamada et al. ‘694 reference, however, does not identify a *rectangle* region that is being modified. Also, the cited reference does not disclose a projection means for taking projection data in both vertical and horizontal directions and therefore does not disclose that it takes projection data in vertical and horizontal directions of the rectangle region. Lastly, the Kamada et al. ‘694 reference does not detect peaks in the projection data. These elements are altogether missing from the cited prior art. As such, since each and every element as set forth in the amended independent claim 1 as amended is not found, either expressly or described inherently in the Kamada et al. ‘694 reference, the presently claimed invention is patentable thereover.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection to claim 1. Furthermore, it is axiomatic that dependent claims contain all of the limitations of the independent claim from which they depend. Therefore, since claims 2 – 5, 7 and 14 depend from claim 1, they are patentable over the Kamada et al. ‘694 reference for at least the same reasons as amended independent claim 1. Accordingly, reconsideration and withdrawal of the rejections to those claims are respectfully requested.

Rejections To Claims 6 and 8 Under 35 U.S.C. 103(a)

The Examiner rejected claim 6 as being unpatentable over the Kamada et al. '694 reference in view of the Koga et al. '794 reference and rejected claim 8 as being unpatentable over the Kamada et al. '694 reference in view of the Tabata et al. '296 reference.

Response

Applicants incorporate herein by reference the arguments presented above in response to the rejection of claim 1 under 35 U.S.C. 102(e) and respectfully traverse the Examiner's rejections.

Therefore, in view of the arguments above with respect to amended independent claim 1, the rejections to dependent claims 6 and 8 have been rendered moot. Accordingly, Applicants request reconsideration and withdrawal of the rejections thereto.

Rejections To Claims 9 – 13 and 15 Under 35 U.S.C. 103(a)

The Examiner rejected claims 9 – 13 and 15 as being unpatentable over the Kamada et al. '694 reference in view of the Kodaira et al. '823 reference.

Response

Claim 11 has been canceled thereby rendering the Examiner's rejection thereto moot. Since claim 12 depends from claim 1 and therefore contains all of the limitations of claim 1, Applicants incorporate herein by reference the arguments presented above in response to the rejection of claim 1 under 35 U.S.C. 102(e) and submit that claim 12 is patentable over the cited references.

Applicants respectfully traverse the Examiner's rejections of claims 9 – 13 and 15.

To establish a *prima facie* case of obviousness, the Examiner must establish that the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

Applicants amended claim 9 to recite a region extracting means that comprises a first judgment means for judging whether an attribute of a rectangle region is one of a character and ruled line. Claim 9 has been further amended to recite a projection means and a second judgment means for judging whether the attribute of the rectangle regions is one of a table, a photograph, and a frame.

The present invention as claimed in claim 9 is directed toward a document modification apparatus. More particularly, claim 9 claims a region extraction means comprises a first judgment means for judging whether the attribute of a *rectangle* region is one of a “character” and “ruled-line.” Further, claim 9 claims a “projection means” takes projection data in both a *vertical and a horizontal direction* of the rectangle region. Lastly, claim 9 claims a second judgment means judges whether an attribute is one of a table, a photograph and a frame based on *peaks* detected from the projection data.

The Kamada et al. ‘694 reference discloses performing region identification of an input image. The type code of each region and the individual code of a recognition result are then displayed, so that a user can modify both of the results of the region identification and the recognition process at one time. The Kamada et al. ‘694 reference also discloses displaying an original image close to the recognition result. The Kamada et al. ‘694 reference, however, does not identify a *rectangle* region that is being modified. Also, the cited reference does not disclose a projection means for taking projection data in both vertical and horizontal directions, and

therefore does not disclose that it takes projection data in vertical and horizontal directions of the rectangle region. Lastly, the Kamada et al. '694 reference does not detect peaks in the projection data. These elements are altogether missing from the cited prior art. As such, since each and every element as set forth in the amended independent claim 9 as amended is not found, either expressly or described inherently in the Kamada et al. '694 reference, the presently claimed invention is patentable thereover.

The Examiner has not shown how the secondary reference accounts for the deficiencies of the primary reference as shown above. As such, neither the Kamada et al. '694 reference nor the Kodaira et al. '823 reference alone or in combination teaches or suggests all of the limitations of each of claims 9 – 13 and 15.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection to claim 9. Furthermore, it is axiomatic that dependent claims contain all of the limitations of the independent claim from which they depend. Therefore, since claims 10, 13 and 15 depend from amended claim 9, Applicants submit that they are patentable over the cited references for at least the same reasons as amended independent claim 9. Accordingly, reconsideration and withdrawal of the rejections to those claims are respectfully requested.

Accordingly, Applicants request reconsideration and withdrawal of the rejections thereto.

MISCELLANEOUS

Additionally, the references cited by the Examiner have been reviewed and it is submitted that the claims as herein amended and resubmitted are patentable thereover.

CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

Respectfully submitted,

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